

**Work Order ID 64545**

December 8, 2010 8:30:09 AM

Page 1

Item ID: D3021-041

Accept

Setup Start

Revision ID:

Stop

Item Name: Tube Assembly

Start Date: 12/09/10 Start Qty: 1.00

Required Date: 12/17/10 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

Draw Nbr

Revision Nbr

D3021

Rev A

100

0.00



Large Fab

Large Fab

Memo

0.00

Large Fab

1-Cut tube as per Dwg D3021

2-Drill tube as per Dwg D3021 using D8622

3-Debur

4-Weld as per Dwg D3021 QSI004

A/R 4130 Rod Batch: 100075

EL 10-12-15 X1

110

QC9- Inspect visual per QSI004- Fusion Welds

0.00



QC

Memo

0.00

Quality Control

1 Ø BE 10-12-16

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Work Order ID 64545

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Item ID: D3021-041

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Setup Start



Revision ID:

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Item Name: Tube Assembly

Start Date: 12/09/10 Start Qty: 1.00



Cust Item ID:

Required Date: 12/17/10 Req'd Qty: 1.00

Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

120

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

130

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

0.00



Powdercoat

M 112588

Memo

0.00

Powder Coating

START TIME: 3:50  
OVEN TEMPERATURE: 320°  
FINISH TIME: 4:30

1 BL 10-12-10

140

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

ul 10-12-17

1 9

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 64545**

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Page 3

Item ID: D3021-041

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Setup Start

Revision ID:

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Item Name: Tube Assembly

Start Date: 12/09/10 Start Qty: 1.00

Cust Item ID:

Required Date: 12/17/10 Req'd Qty: 1.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

150

Identify as per dwg & Stock Location: *57248*

0.00



Packaging

Memo

0.00

Packaging

160

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

*12/12/10**10/12/2010**ME*  
*10-12-17*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

December 8, 2010 8:30:08 AM

Page 1

Work Order ID: 64545

Parent Item: D3021-041

Parent Item Name: Tube Assembly

Start Date: 12/09/10


Required Date: 12/17/10

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP 01.10.23 New Issue SM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
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D3017-11		Manufactured	No			100	Each	33.0000	2	2			
													
cap													

Location	Loc Qty	Loc Code
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WA	33	
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44779	8	
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52583	25	
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M4130NT0.750W.049		Purchased	No			100	f	139.1667	2.0833	2.192947			
													
4130 RD Tube .750 x.049W													

Location	Loc Qty	Loc Code
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MAT033	139.1667	
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10133	13	
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110740	126.1667	
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EL 1078-15

2

12 107875

2.5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

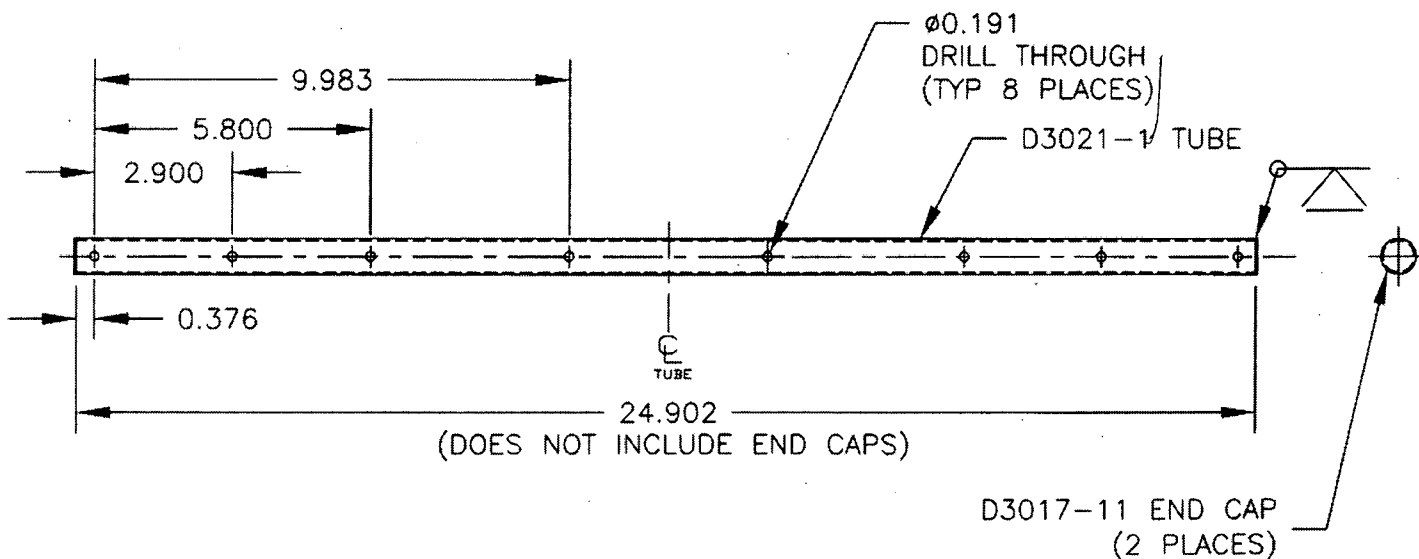
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>#</i>	APPROVED <i>#</i>	DRAWING NO. D3021	REV. A SHEET 1 OF 1
DATE 01.05.18		TITLE TUBE ASSEMBLY	SCALE 1:4
A	01.05.18	NEW ISSUE	



D3021-041 TUBE ASSEMBLY  
(D3021-1 TUBE)

*W/B 01/05/18*

NOTES:

- 1) PART IS SYMMETRIC ABOUT CENTERLINE
- 2) MATERIAL: AISI 4130 TUBE,  $\phi 0.75$  DIA x 0.049 WALL (M4130N-T0750W049)
- 3) WELD PER DART QSI 004
- 4) FINISH: POWDER COAT GREY SANDTEX (REF 4.3.5.6) PER DART QSI 005 4.3
- 5) ALL DIMENSIONS ARE IN INCHES
- 6) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.

RELEASED  
01.05.30

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